WHAT IS CLAIMED IS:

1. A navigation apparatus comprising:

a present location detecting unit for detecting a present location information of a movable body in response to a user's request for an optimum travel route to a designated destination;

a present link detecting unit for receiving the present location information from the present location detecting unit, and detecting a present link information corresponding to the present location from stored map data;

a neighboring link detecting unit for receiving the present link information from the present link detecting unit, and detecting information of neighboring links of the present link from the stored map data;

a neighboring link information storing unit for receiving and storing therein the detected results from the present link detecting unit and the neighboring link detecting unit;

a selected link information storing unit for storing an optimum neighboring link information selected out of the information of the neighboring links stored in the neighboring link information storing unit;

a route calculating unit for receiving the present link information and the information of the neighboring links from the neighboring link information storing unit, calculating a cumulative travel time from the present location of the movable body to each neighboring link using predetermined weighted values assigned to a traveling direction of each of the present link information and the information of the neighboring links, selecting an optimum neighboring link information, and storing the selected optimum neighboring link information in the selected link information storing unit; and

an optimum route detecting unit for determining whether the selected link information storing unit stores the link information including a destination information, detecting the link information including the destination information from the selected link information storing unit and information of the neighboring links from a link including the destination to a departure point, and outputting an optimum travel route .

2. The navigation apparatus as set forth in claim 1, wherein the neighboring link detecting unit detects information of all the links neighboring the present link in the direction of the destination according to location and direction information of each of the links stored in the map data.

3. The navigation apparatus as set forth in claim 1, wherein the route calculating unit calculates the cumulative travel time from the present link to a corresponding neighboring link using a weighted value assigned to a node being in the range of the departure point, being higher than the predetermined weighted value.

4. The navigation apparatus as set forth in claim 3, wherein the route calculating unit sets a virtual time information according to the weighted values, and calculates the cumulative travel time from the present link to the corresponding neighboring link according to the set virtual time information.

5. A method for calculating an optimum travel route using a navigation apparatus, comprising the steps of:

a) detecting present location information of a movable body in response to

a user's request for the optimum travel route to a designated destination;

b) detecting present link information corresponding to the present location information of the movable body from stored map data;

c) detecting information of links neighboring the present link in the direction of the destination from the map data;

d) calculating a cumulative travel time from the present location of the movable body to each neighboring link using the predetermined weighted values assigned to each of traveling directions of the present link information and the information of the neighboring links;

e) selecting one optimum neighboring link information out of the neighboring link information detected from the map data according to the calculated cumulative travel time of each neighboring link; and

f) repeating steps c) to e), subsequently detecting the optimum travel route from the selected optimum neighboring link information when a finally selected optimum neighboring link information includes destination information, and outputting the detected optimum travel route.

6. The method for calculating an optimum travel route using a navigation apparatus as set forth in claim 5, wherein at step c), information of all links neighboring the present link in the direction of the destination are detected according to location and direction information of each of the links stored in the map data.

7. The method for calculating an optimum travel route using a navigation apparatus as set forth in claim 5, wherein at step d), the cumulative travel time from the present link to a corresponding neighboring link is calculated using a

weighted value assigned to a node being in the range of the predetermined departure point, being higher than the predetermined weighted value.

8. The method for calculating an optimum travel route using a navigation apparatus as set forth in claim 7, wherein at step d), a virtual time information is set according to the weighted values, and the cumulative travel time from the present link to the corresponding neighboring link is calculated according to the set virtual time information.